CHAPTER II.

MANAGEMENT OF STATE FORESTS.

I.—REGULATION OF MANAGEMENT.

(*a*).—Working Plans and their Control.

32. Mr. T. B. Fry, Deputy Conservator of Forests, 1st Grade, was in charge of the Working Plans Division from the commencement of the year till the 29th November 1896, when Mr. R. S. Fagan, Deputy Conservator of Forests, 2nd Grade, succeeded him and held it until the end of the year.

33. The operations of this officer were confined to the Divisions of East Khándesh, Násik, Ahmednagar, Poona and Sátára.

34. During the fair season 134 compartments were demarcated upon the ground, at a total cost of Rs. 1,001; of these compartments aggregating 704·025 acres are located in the bábul forests of the Poona Division, and 91 compartments with an area of 13,835·225 acres in the teak forests of the East Khándesh, Násik, Ahmednagar, Poona and Sátára Divisions. Six of the compartments were for exploitation during 1896-97, and 128 for exploitation in the ensuing year. 693 cairns and 806 mounds were erected, 14,052 intermediate stones were imbedded, and 483 ditches were dug to define the limits of these compartments: and 667 old cairns were also repaired. In addition to this the surveyors employed under the several Divisional Forest Officers demarcated on the ground 82 compartments with an area of 4,634 acres, at a total cost Rs. 299-7-7. The whole work of the year can be tabulated thus:—

No.	Divisions.	I.—By the Working Plans Division.						II.—By District Divisional Officers.					
		Number of Compartments.	Area of Compartment.		Cost of Demarcation.		Number of Cairns erected.	Number of Compartments.	Area of Compartment.		Cost of Demarcation.		Number of Cairns erected.
			Total.	Average.	Total.	Average.			Total.	Average	Total.	Average.	
			Acres.	Acres.	Rs. a. p.	Rs. a. p.			Acres.	Acres.	Rs. a. p.	Rs. a. p.	
1	East Khándesh.	24	7,981·7	332·571				5	123	24	3 0 0	0 9 7	Not known
2	West do. ...	...	.....	...				10	2,474	247	31 0 0	3 1 2	143
3	Násik	30	3,026·1	100·8			806 cairns. 667 uralis. 14,052 stones. 483 ditches.	2	293	146	44 0 0	22 0 9	120
4	Ahmednagar ...	16	1,543·7	96·6	1,000 9 5	10 2 6		28	213	8	1 0 0	0 0 7	64
5	Poona	51	1,118·725	21·985				19	743	39	134 0 0	7 1 4	348
6	Sátara	13	869·025	66·845				18	788	44	86 0 0	4 12 4	1,897
7	Sholápur ...	...	.....	...				...	...	...	...	...	...
	Total ...	134	14,539·25	108·5	1,000 9 5	10 2 6	...	82	4,634	57	299 0 0	3 10 5	2,572

34. Notwithstanding the fact that the number of compartments demarcated during the year by the staff of the Working Plans officer was less than that of the preceding year by 43, and the area by 248·46 acres, the cost of demarcation has been greater; the reasons for this excess, as explained by the Divisional Forest Officer, Working Plans, are—

(*a*). The compartments this year were more scattered than in the past year, especially in the case of the bábul forests.

(*b*). 1,022-16 acres in the Sátpuda forests of the Chopda Range of the East Khándesh Division were demarcated in a country more difficult to work over on account of the hilly broken ground and the dense jungle covering it, and on account of the absence of villages, and of labour not being obtainable on the spot, but having to be brought up from the plains.

(*c*). Labour has been very difficult to procure in remote forest areas owing to the famine, and to the disinclination of villagers to go long distances from their homes; in the Sátpudas at one time work was practically stopped for want of hands.

35. The Working Plan for the Purandhar Range in the Poona Division was made during the rains, and a scheme was drawn up for differentiating the blocks

of Kopergaon, Nevása and Shrigonda Ranges of the Ahmednagar Division, which had been submitted to the Conservator last year and was returned by him for revision. While during the working season Mr. Fagan visited forests in the Ahmednagar, Násik and East Khándesh Divisions, and discussed with the respective Divisional Forest Officers the schemes of Working Plans to be applied to the forests of those districts.

36. The proportion of forests in the several divisions which have been differentiated into "forest blocks" and are placed under systematic treatment, is exhibited in the following table:—

No.	Division.	Area of Forest.	Area differentiated up to the end of 1896-97.	Area still remaining.	Percentage of Forest under detailed treatment.
1	East Khándesh...	811	774	37	95·43
2	West do.	1,739	139	1,600	8·01
3	Násik	1,279	819	460	64·03
4	Ahmednagar	848	428	420	50·47
5	Poona	711	464	247	65·26
6	Sátára	698	85	613	12·35
7	Sholápur	278	8	270	2·87
	Total ...	6,364	2,717	3,647	42·68

37. From the above it will be seen that a total area 2,717 square miles has been brought provisionally under Working Plans arrangement up to the close of the year, but only a few of the 40 exploitable compartments, into which each forest block contained within this total area has been subdivided, have been laid out on the ground; and in so far as this state of incompletion affects the Working Plans, it may justly be said that these Working Plans exist as yet mainly on paper. But the Conservator would, for the reasons explained in paragraph 41 of the Administration Report of the Central Circle for 1895-96, respectfully submit that this is not a serious defect, for to lay out all the 40 compartments on the ground in every forest block in the seven divisions of the Central Circle means to clear vegetation from and erect boundary-marks upon many thousands of linear miles of country, on the flat, as well as up mountain sides, down and across ravines and dales; and it would require the employment of an enormously large establishment of surveyors and measurers to complete this work within the space of the working seasons contained within a decade of years. As far as means will permit the demarcation of compartments on the ground is being pushed, and so long as this demarcation keeps well ahead of the coming year, and discovers no important errors in the large scales forest maps of the Forest Survey in boundaries and areas, as much is being done as is immediately necessary and is possible with the means at command.

(*b*).—Annual Plans of Operations.

38. Each Divisional Forest Officer submitted as usual a general and detailed scheme of forest operations to be undertaken during the year regulated by the funds available for expenditure in the sanctioned Budget Estimates; and after approval by the Collector and the Conservator of Forests, the operations were started, and were carried out, with slight deviations.

II.—WORKING OF THE YEAR.

(*a*).—Communications and Buildings.

(*1*).—*Roads.*

39. The Public Works Department being fully occupied upon the extensive famine relief works which had perforce to be undertaken in every division of the Circle, was not able to do anything towards the construction of any new roads that could serve the exploitation of produce from the forests.

40. From the forest budget funds an expenditure of Rs. 817 has been made in the construction of new cart tracks, and of repairs to an existing one, which penetrate reserved forests.

(1). In the East Khándesh Division Rs. 767 were spent in making cart tracks over a length of 22 miles in the Sávda and Yával Sátpuda mountain forests in their northern profile, in order to open out a grass-producing region of about 70 square miles, which had hitherto been closed against wheeled transport, and from which grass had never been exploited before, for the purpose of extracting grass for supply to famine-affected districts outside Khándesh; this road enabled the grass of the left Aner Valley in the Sávda and Yával Sátpuda hills to be carted to the Ráver railway station, G. I. P. Railway, where a steam press, and several hand-presses were employed in compressing and baling hay; and the road will be very useful in future years for the extraction of timber, bámbus and other forest produce on carts, which hitherto have been unable to get into this wild and difficult part of the country. The greater portion of the outlay has, however, been debited to famine grass operations.

(2). Rs. 50 have been spent on the annual repairs to the Kalambari forest road in the Pimpalner Range of the West Khándesh Division.

(2).—Buildings.

41. A Range Forest Office with a seed room was built in the Mámlatdár's kacheri at Nevása in the Ahmednagar Division, at a cost of Rs. 2,167. Additions and alterations to existing buildings were made, as detailed below, under the sanction given by the Conservator of Forests from the discretionary grant placed at his disposal by Government :—

No.	Executive Officer.	Nature and locality of work.	Amount sanctioned.
			Rs.
1	Executive Engineeer, Khándesh...	Additions and alterations to the Range Forest Office at Bhadgaon.	97
2	Do. Sátára ...	Putting tiles over the corrugated iron roof of the Range Forest Office at Tásgaon.	54
3	Do. do. ...	Making additions and alterations to the Range Forest Office at Malcolmpeth.	447
4	Do. Sholápur ...	Providing a weather board to the window of the Range Forest Office at Sholápur.	.5
5	Do. Sátára ...	Additions and alterations to the Range Forest Office at Sátára.	21
6	Do. do. ...	Additions and alterations to the Range Forest Office at Shirála.	54
7	Do. do. ...	Do. do. at Tásgaon ...	42
8	Do. do. ...	Do. do. at Wái ...	55
9	Do. do. ...	Do. do. at Waduj ...	134
10	Do. do. ...	Do. do. at Dahivadi ...	17
11	Do. do. ...	Constructing a well with retaining wall for the Forest Bungalow at Lingmala.	473
12	Do. do. ...	Making a concrete floor to the Range Forest Office at Pátan.	43
		Total ...	1,442

(3).—Other Works.

42. Rs. 1,256 have been expended in the construction of wells of potable water in the wild forest tracks of the Sátpudas.

43. Repairs to forest guards' huts, and the building of new huts also, for housing forest guards in their beats in five divisions of the Central Circle, account for a sum of Rs. 1,256-0-0, distributed thus :—

No.	Division.	Amount.
		Rs.
1	East Khándesh	657
2	West Khándesh	418
3	Násik	159
4	Ahmednagar	15
5	Poona	7
6	Sátára	...
7	Sholápur	...
	Total ...	1,256

(*b*).—PROTECTION OF FORESTS FROM INJURY.

(*1*).—*General Protection and Breaches of Forest Law.*

44. The year opened with 180 prosecutions in progress before Magistrates and 15 cases undergoing disposal by forest officers under Section 67 of the Forest Act. During the year 13,199 cases of breaches of Forest law were discovered, but in 2,312 of these cases the offender was not traced; 2,189 cases were treated under Section 67 of the Forest Act by forest officers; 1,610 cases were sent up for trial by Magistrates; and 7,088 cases were let off by forest officers, who warned the accused persons and relieved them of further proceedings under the forest law. The number of old and new cases under hearing amounted to 1,790 against 1,799 of the past year: of these 1,177 cases involving 3,101 persons were disposed of by conviction and punishment of the accused persons, while 321 cases involving 995 persons were dismissed, and 292 cases were left pending at the end of the last day of the forest-year, *viz.*, 30th June 1897. Of the 2,204 cases, including 15 of the preceding year treated under Section 67 of the Indian Forest Act by the Divisional Forest Officers, 2,091 implicating 4,851 persons were settled, and 113 remained unfinished when the year closed. A comparison of the prosecutions completed during 1895-96 and during the year of the report, with their results and relative percentages of failures, is given in the following statement :—

No.	Division.	1895-96.		1896-97.		Percentage of Failures.	
		Prosecutions.	Acquittals.	Prosecutions.	Acquittals.	1895-96.	1896-97.
1	East Khándesh	155	19	69	15	12·2	21·7
2	West Khándesh	76	8	112	13	10·5	11·6
3	Násik	157	19	107	9	12·1	8·4
4	Ahmednagar	405	74	422	107	18·2	25·3
5	Poona	458	110	487	104	24·0	21·3
6	Sátára	421	67	251	62	15·9	24·7
7	Sholápur	127	36	50	11	28·3	22·0
	Total ...	1,799	333	1,498	321	18·5	21·4

46. This table shows that during the year there were 301 or by 16·7 per cent. fewer prosecutions than during the previous year. Sholápur, East Khándesh, Sátára and Násik exhibit a decrease of 60·6, 55·4, 40·3 and 31·8 per cent. respectively, but on the other hand the percentage of failures in East Khándesh and Sátára is 9·5 and 8·8 greater than that of the previous year; Násik records a considerable improvement, the difference in percentage of failures being only 3·7; and Sholápur also has a better show than last year, the percentage of its failures being 6·3 less than of the prvious year. In the West Khándesh and Poona Divisions

prosecutions were 60·5 and 6·3 per cent. greater, and acquittals were respectively 1·1 greater and 2·7 per cent. less. Ahmednagar shows an increase both in the number of prosecutions and in the percentage of failures, the results being 4·1 and 7·1 respectively.

47. As required by Government Resolution No. 5148, dated 9th July 1897, a classification of the cases taken into Court, those dealt by Forest officers under Section 67 of the Forest Act, and those that were not detected, during the year, is given in the subjoined table :—

Division.	Cases taken into Court.				Cases Compounded.				Cases undetected.				Total Cases.				Grand Total of cases.
	Injury to Forests by fire.	Unauthorised felling or appropriation of wood and other minor Forest produce.	Grazing without permission or in tracts in which grazing is prohibited.	Other offences.	Injury to Forests by fire.	Unauthorized felling or appropriation of wood and minor Forest produce.	Grazing without permission or in tracts in which grazing is prohibited.	Other offences.	Injury to Forests by fire.	Unauthorized felling or appropriation of wood and minor Forest produce.	Grazing without permission or in tracts in which grazing is prohibited.	Other offences.	Injury to Forests by fire.	Unauthorized felling or appropriation of wood and minor Forest produce.	Grazing without permission or in tracts in which grazing is prohibited.	Other offences.	
East Khándesh ...	9	16	37	14	3	159	...	129	17	22	...	12	29	197	37	155	418
West Khándesh ...	25	59	3	40	...	211	37	132	53	31	1	5	78	301	41	177	597
Násik	8	111	12	7	5	210	8	3	49	57	3	1	62	378	23	11	474
Ahmednagar ...	3	55	300	71	...	38	39	7	5	138	59	11	8	231	398	89	726
Poona	8	216	217	107	...	201	164	20	48	342	1,184	12	56	759	1,565	139	2,519
Sátára	8	47	150	43	1	196	471	...	37	180	19	7	46	423	640	50	1,159
Sholápur	...	4	32	8	...	2	55	...	...	18	1	...	...	24	88	8	120
Total ...	61	508	751	290	9	1,017	774	291	209	788	1,267	48	279	2,313	2,792	629	6,013

48. It will be perceived that though the number of cases relating to injury to forests from fire have gone down by 574, forest crime under other classes exhibits a considerable increase, and this may be attributed to two reasons, *viz.* : (1) a pinch for food caused by famine that prevailed during the year, which drove people to resort to illicit practices : (2) to better attempts on the part of forest subordinates to detect crime.

49. Undetected offences under the class "Grazing without Permission" or "Grazing in tracts in which it is prohibited" show a considerable rise, because owing to the extreme scarcity of fodder owners of cattle let their animals roam about the country untended in search of food, and the animals naturally trespassed when they were attracted by the presence of vegetation.

50. The system of reporting offences to and their treatment by forest officers prescribed in Government Resolutions Nos. 4516 and 6102, dated respectively the 15th June and 10th August 1895, has been in force and has worked fairly well.

51. The clsssification of the sums of money offered to and accepted by Divisional Forest Officers under Section 67 by way of compensation for the forest offence from the accused person, in amounts of rupee 1 and upwards to the maximum of Rs. 50, required by Government Resolution No. 1899, dated 13th March 1891, is as under :—

No.	Division.	Number of cases in which compensation was fixed at Rupees																								
		Re. 1	Rs. 2	,, 3	,, 4	,, 5	,, 6	,, 7	,, 8	,, 9	,, 10	,, 11	,, 12	,, 13	,, 14	,, 15	,, 16	,, 17	,, 18	,, 19	,, 20	,, 21	,, 22	,, 23	,, 24	,, 25
1	East Khándesh...	149	44	34	21	15	6	7	...	2	3	1	1	4	1	...	1	...	1	1	5	...	...	1	1	...
2	West Khándesh..	262	68	22	7	15	...	1	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
3	Násik	129	39	21	14	5	5	3	...	...	5	...	3	...	1	1	...	...	...	...	...	...	...	...	...	...
4	Ahmednagar ...	19	13	13	4	7	3	3	3	2	3	...	1	...	...	2	1	2	...	...	3	...	...	...	...	...
5	Poona	79	77	36	32	36	26	15	21	6	16	2	2	8	1	11	3	2	...	...	3	1	...	2	...	1
6	Sátára	139	127	86	72	72	38	22	20	15	16	8	11	4	8	6	2	3	2	1	6	3	2	...	...	2
7	Sholápur	8	15	7	11	3	2	2	2	2	4	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
	Total ...	785	383	209	161	153	80	53	46	28	47	11	18	17	11	21	7	7	3	2	17	4	2	3	1	4

No.	Division.	Number of cases in which compensation was fixed at Rupees																										Total.
		26 Rs.	27 ,,	28 ,,	29 ,,	30 ,,	31 ,,	32 ,,	33 ,,	34 ,,	35 ,,	36 ,,	37 ,,	38 ,,	39 ,,	40 ,,	41 ,,	42 ,,	43 ,,	44 ,,	45 ,,	46 ,,	47 ,,	48 ,,	49 ,,	50 ,,	
1	East Khándesh...	1	...	...	...	...	..	...	...	1	...	...	...	...	...	...	...	...	...	...	...	..	1	...	...	...	291
2	West Khándesh...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	1	380
3	Násik	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	226
4	Ahmednagar ...	1	...	...	...	...	...	...	...	...	...	...	..	1	...	...	..	1	...	...	...	...	..	1	...	1	84
5	Poona	...	...	1	...	...	...	...	...	...	...	1	1	1	...	1	...	...	...	...	...	...	..	...	...	...	385
6	Sátára	...	...	...	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	668
7	Sholápur... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	..	...	...	...	...	...	...	..	...	...	...	57
	Total ...	2	...	1	2	1	1	...	...	1	...	1	1	2	...	1	...	1	...	...	...	...	1	1	...	2	2,091

52. The money collected by way of compensation under Section 67 of the Forest Act was credited in full to forests under *Vc.* and no deduction was made for making rewards to persons who were instrumental to the detection of the offences.

53. No Divisional Forest Officer except of Poona and Sátára exercised the power vested in him by Government Resolution No. 8568, dated 16th December 1887, Revenue Department, of giving rewards in Section 67 cases disposed of by him. The Divisional Forest Officers of Poona and Sátára distributed Rs. 70, and Rs. 504 in rewards in 33 and 410 cases out of the 385 and 668 cases compounded by them respectively. In this connection the Conservator would remark that the payment of reward in Section 67 cases should, he thinks, be the invariable as it is in cases tried by Magistrates, for the reason that a reward works not only towards improved efficiency in protection of forests and in the detection of crime, but also towards honesty by discouraging subordinates from yielding to the temptation of entering into a private settlement for a consideration given and received with the offender whom he has detected in the act of committing a forest offence, and for other reasons it does not appear to be a desirable distinction that a reward may be earned only by a case successfully prosecuted before a Magistrate and not in respect of a case which has been settled successfully by the Divisional Forest Officer and the accused person without the latter having been brought up a prisoner before the bar.

54. The following table illustrates the extent to which rewards were paid in cases tried by Magistrates during 1895-96 and 1896-97 :—

No.	Division.	Amount of reward paid in	
		1895-96.	1896-97.
		Rs.	Rs.
1	East Khándesh	203	214
2	West Khándesh	268	197
3	Násik	232	200
4	Ahmednagar	643	1,222
5	Poona	1,127	1,050
6	Sátára	1,673	472
7	Sholápur	326	140
	Total ...	4,472	3,495

55. Compensation to the extent of Rs. 7,647 was accepted in 2,091 cases disposed of under Section 67 against Rs. 6,602 in 2,056 of the previous year. The distribution of the figures among the several Divisions is as under :—

No.	Division.	1895-96.		1896-97.	
		Number of cases.	Compensation.	Number of cases.	Compensation.
			Rs.		Rs.
1	East Khándesh	217	536	291	916
2	West Khándesh	261	604	380	519
3	Násik	263	632	226	356
4	Amednagar	54	234	84	483
5	Poona	542	2,982	385	2,002
6	Sátára	103	467	668	3,173
7	Sholápur	616	1,147	57	198
	Total ...	2,056	6,602	2,091	7,647

56. There has been an increase both in the number of cases and in the amount of compensation of the East Khándesh Division in consequence of detected offences under the rules of Section 41 of the Forest Act having been compounded instead of sent before the Magistrates. The Divisional Forest Officers, West Khándesh and Ahmednagar, have not explained the reasons for the increases of compounded cases in their charges. The small decline in Násik is owing to the Divisional Forest Officer having let off with a warning some cases sent up to him for disposal under Section 67, and the incidence of the compensation received in this Division shows that a comparatively light assessment was imposed by the Divisional Forest Officer in the cases settled by him. Illicit grazing offences in Poona have diminished 50 per cent. in consequence of the opening of large areas of closed forests to grazing and in the dearth of grass under the effects of drought. A considerable increase, both in the number of offences and in the amount of compensation, has taken place in the Sátára District, because the Divisional Forest Officer, Sátára, preferred the system of dealing with the more common and less serious classes of forest offences under Section 67 to that of prosecuting them, for the reasons that it saves much of the time of the Protective Establishment from being spent in the Magistrate's Courts, and allows their more constant presence within their beats in the forest areas; it saves the self-respect of an offender who may not be a hardened or a willing criminal, and the witnesses for the defence and prosecution escape the trouble and vexation of undertaking journeys to and from the Magistrate's Courts, with the delays that inevitably occur before a case is tried and judgment given.

57. The orders contained in Government Resolution No. 4516, dated 15th June 1895, which direct that no order should be given to proceed under Section 67 in any case in which the Divisional Forest Officer would not be prepared to order magisterial proceedings to be taken as an alternative, have caused the great fall noticeable both in the number of cases compounded; and there is a proportional rise in the "warned" cases; as formerly compensation could be accepted, as is provided in Section 67, from any person against whom a reasonable suspicion exists that he has committed a forest offence, although there might not be such a complete chain of evidence as would lead to a conviction were the accused person to be prosecuted in a Magistrate's Court.

58. A number of detected trivial offences, which were not the outcome of deliberate intention, but were committed through ignorance of law, or were the acts of children or of minors, and several offences, each of which was the first offence registered against the accused person, were let off by the Divisional Forest Officers with a warning administered to the offenders. The statement below gives the classification of and comparison between the "warned cases" of 1895-96 and those of the year of this report :—

No.	Division.	1895-96.					1896-97.				
		Classification.					Classification.				
		Total.	Fires.	Timber.	Grazing.	Other offences.	Total.	Fire.	Timber	Grazing.	Other offences.
1	East Khándesh	589	4	41	455	89	291	27	89	132	43
2	West Khandesh	122	...	6	70	46	291	...	7	265	19
3	Násik	725	33	28	650	14	861	5	180	643	33
4	Ahmednagar	2,664	1	32	2,630	1	2,420	...	39	2,381	...
5	Poona	2,330	10	131	2,188	1	844	...	83	743	18
6	Sátára	2,049	23	108	1,791	127	1,463	12	183	1,194	74
7	Sholapur	1,382	...	...	1,382	...	918	...	53	863	2
	Total ...	9,861	71	346	9,166	278	7,088	44	634	6,221	189

59. Offences under "Timber" have nearly doubled, while those under "other classes" and especially under "grazing" show a considerable falling off, owing to the fact that extensive portions of the closed forests were thrown open to free grazing in consequence of the prevailing scarcity of fodder supply.

60. An account of the total number of Police cases of the two years is given in the table below :—

No.	Division.	Prosecuted.		Compounded.		Warned.		Undetected.		Total.	
		1895-96.	1896-97.	1895-96.	1896-97.	1895-96.	1896-97.	1895-96.	1896-97.	1895-96.	1896-97.
1	East Khándesh	155	69	217	291	589	291	98	51	1,059	702
2	West Khándesh	76	112	261	380	122	291	147	90	606	873
3	Násik	157	107	263	226	725	861	179	110	1,324	1,304
4	Ahmednagar	405	422	54	84	2,664	2,420	107	213	3,230	3,139
5	Poona	458	487	542	385	2,330	844	613	1,586	3,943	3,302
6	Sátára	421	251	103	663	2,049	1,463	280	243	2,853	2,625
7	Sholápur	127	50	616	57	1,382	918	12	19	2,137	1,044
	Total ...	1,799	1,498	2,056	2,091	9,861	7,088	1,436	2,312	15,152	12,989

61. For the reasons explained in the foregoing paragraph the total number of police cases during the year has diminished by 2,163, and proportionate decrease is visible in the number of "prosecutions" and in the number of "warned cases". The percentage of prosecutions in respect of the detected cases is 14·03 against 11·8 of the preceding year.

62. These results show that forest crime is not so common or generally prevalent in the Central Circle as might be expected seeing that the table above represents an account of 12 months, and that it concerns 4,065,496 acres of reserved forests.

(2).—*Protection from Fire.*

63. The statement subjoined gives a comparison between the results of fire conservancy of the two years :—

No.	Division.	Forest area placed under protection against fire in acres.		Failures.		Percentage burnt.		Expenditure, incurred in Rupees.	
		1895-96.	1896-97.	1895-96.	1896-97.	1895-96.	1896-97.	1895-96.	1896-97.
1	East Khándesh ...	519,104	521,887	45,999	62,495	8·5	11·9	144	57
2	West Khándesh...	1,111,451	1,115,999	211,721	110,780	12·5	9·9	568	1,704
3	Násik	818,805	818,823	18,279	4,383	2·2	0·5	198	532
4	Ahmednagar ...	542,997	542,847	3,172	28	0·5	0·005	17	—2
5	Poona	455,444	456,096	21,166	771	4·6	0·16	6	367
6	Sátára	446,691	446,920	1,653	557	0·3	0·12	40	82
7	Sholápur	177,752	177,863	853	4	0·4	0·002	1	...
8	Famine, Grass and Grazing.	.....	.....	.....	.....	...	...	...	1,425
	Total ...	4,072,244	4,080,435	302,843	179,018	7·4	4·3	974	4,165

64. The area placed under protection against fire corresponds with that of the preceding year, but the area traversed by fire during the year and the percentage of failures are, excepting those of East Khándesh, very much below those of 1895-96. The figures of West Khándesh are not very trustworthy, as it is said that a considerably large proportion of the forests was burnt than these figures represent.

65. The expenditure on fire conservancy during the year is more than 4 times greater than that of the past year, and this is due to special fire watchers having been entertained to protect edible grass for local supply and for transport to the famine-affected districts in the Deccan and Southern Mahrátta Country.

66. Two hundred and eighty-three fires occurred during the year. Of 148 of these the origin was discovered, but in respect of 135 fires it could not be ascertained how and by whom the fire had been caused. Prosecutions in regard of 68 fires, including 12 of the previous year, were instituted with the result shown in the following statement :—

Division.	Details of prosecutions for offences by fire.						Remarks.
	Serial Number of fire.	Areas burnt in acres.	Character of offence (whether careless or intentional).	Whether acquitted or convicted.	Section of law under which convicted.	Amount of punishment.	
East Khándesh	14	300	Carelessness in smoking.	Convicted .	Indian Forest Act 25 (*b*).	Fine Rs. 3 and compensation Rs. 7.	
	18	8,686	Do. ..	Do. ..	Do. ..	3 days' imprisonment and compensation Rs. 10.	
	21	15	Do. ..	Do. ..	Do. ..	Fine Rs. 15 and compensation Rs. 20.	
	29	1,000	Do. ..	Do. ..	Do. ..	1 day's imprisonment and fine Rs. 25. Compensation Rs. 30.	
	16	2,000	Do. ..	Do. ..	Do. ..	Imprisonment for one month.	
	12	300	Do. ..	Do. ..	Do. ..	Ditto.	
	17	5,000	Do. ..	Do. ..	Do. ..	Do. 1½ month.	
	23	15,000	Do. ..	Do. ..	Do. ..	Do. 3 months.	
	26	42	Do. ..	....	....	Pending.	
	9	32,343	....	....	.. ..	.....	
West Khándesh	4	500	Careless	Convicted ..	Indian Forest Act 25 (*b*).	Fine Rs. 10 and imprisonment for 5 days.	
	50	25	Do. ..	Do. ..	Do. ..	Fine Rs. 5.	
	57	4,216	Intentional	Do. ..	Do. ..	Do. ,, 10.	
	58	1,343	Careless	Do. ..	Do. ..	Do. ,, 2.	
	59	9,699	Do.	Do. ..	Do. ..	Do. ,, 2.	
	60	1,138	Do.	Do. ..	Do. ..	Do. ,, 2.	
	61	5,000	Intentional	Do. ..	Do. ..	Do. ,, 4.	
	63	1,153	Careless	Do. ..	Do. ..	Do. ,, 4.	
	68	6,475	Do.	Do. ..	Do. ..	Do. Re. 1.	
	69	1,615	Intentional	Do. ..	Do. ..	Do. Rs. 5.	
	73	770	Careless	Do. ..	Do. ..	Do. ,, 2.	
	74	2,700	Do.	Do. ..	Do. ..	Do. ,, 4.	
	16	40	Do.	Do. ..	Do. ..	Do. ,, 2.	
	18	60	Do.	Do. ..	Do. ..	Do. ,, 2.	
	29	214	Intentional	Do. ..	Do. ..	Do. ,, 5.	
	31	200	Careless	Do. ..	Do. ..	Do. ,, 8.	
	64	30	Do.	Do. ..	Do. ..	Do. ,, 5.	
	41	100	Intentional	Do. ..	Do. ..	Do. ,, 5.	
	71	250	Careless	Do. ..	Do. ..	Do. ,, 2.	
	5	1,000	Do.	Do. ..	Do. ..	Do. ,, 5.	
	27	700	Do.	Do. ..	Do. ..	15 days' imprisonment.	
	52	1,300	Do.	One convicted and one acquitted.	Do. ..	Ditto. and fine Rs. 20.	
	82	100	Do.	Do. ..	Do. ..	1 month and fine Rs. 20.	
	36	15	Do.	Acquitted ..	....	.. .. ..	
	45	500	Do.	Convicted ...	Indian Forest Act 25 (*b*).	Fine Rs. 10.	
	25	39,143	....	.. ..	.. ..	.....	
Násik ..	1	220	Carelessness ..	Acquitted ..	....	.. .. ..	
	7	90	Do. ..	.. ..	.. ..	.....	Pending.
	8	10	Do. ..	.. ..	....	.....	Do.
	1	25	Do. ..	.. ..	....	.....	Do.
	9	125	Do. ..	Convicted ..	Indian Forest Act 25 (*b*).	Imprisonment for 15 days and damage Rs. 10.	
	10	11	Do. ..	....	.. .. ..	.....	Do.
	11	15	Do. ..	Convicted ..	Indian Forest Act 25 (*b*).	12 weeks' imprisonment and damages annas 3.	
	8	200	Do. ..	Do. ..	Do. ..	Fine Rs. 15 and damages Rs. 20.	
	8	696	.. ..	....	....	....	
Ahmednagar ..	1	1	Carelessness ..	Convicted ..	Indian Forest Act 25 (*b*).	Fine Re. 1.	
	1	1/40	Do. ..	Acquitted ..	.. ..	.....	
	1	2	Do. ..	Do. ..	....	.. .. ..	
	3	3 1/40	....	....	....	.....	

Division.	Details of prosecutions for offences by fire.						Remarks.
	Serial Number of fire.	Areas burnt in acres.	Character of offence (whether careless or intentional).	Whether acquitted or convicted.	Section of law under which convicted.	Amount of punishment.	
Poona	256/28	25	Carelessness ..	Convicted ..	Indian Forest Act 25 (*b*).	Fine Rs. 10 and damages Re. 1..	Pertaining to 1895-96.
	258/30	36	Do. ..	Acquitted ..	....	.....	Do.
	357/38	4	Do. ..	Convicted ..	Indian Forest Act 25 (*b*).	Fine Rs. 41 and damages Rs. 6..	Do.
	84/6	10	Do. ..	Do. ..	Do. ..	Fine Rs. 2 and damages Rs. 1-2-0.	
	333/73	1	Do. ..	Do. ..	Do. ..	Fine Re. 1	Do.
	14/1	40	Intentional.. ..	Do. ..	Do. ..	Imprisonment for 7 days ...	Do.
	29/9	7	Carelessness ..	Do. ..	Do. ..	Fine Re. 1 and damages As. 8.	
	52/15	4	Do. ..	Acquitted .	.. ..	.....	
	19/1	Sq. ft. 9	Do. ..	Convicted ..	Indian Forest Act 25 (*b*).	Fine Rs. 20.	
	46/4	1	Do. ..	Do. ..	Do. ..	Fine Re. 1 and damages As. 4.	
	49/6	24	Do. ..	Do. ..	Do. ..	Fine Rs. 8 and damages As. 12.	
	11	153	....	....	....	.....	
Sátára	11	81	Carelessness ..	Convicted ..	Indian Forest Act 25 (*b*).	Fine Rs. 15..	Pertaining to 1895-96.
	10	9/40	Do. ..	Do. ..	Do. ..	Do. ,, 5	Do.
	16	8	Intentional.. ..	Acquitted ..	.. ..	.....	
	21	25	Do.	Convicted ..	Indian Forest Act 25 (*b*).	Fine Rs. 30	Do.
	24	18	Carelessness ..	Do. ..	Do. ..	Do. As. 12	Do.
	25	6	Do. ..	Acquitted ..	....	.....	
	26	9	Do. ..	Convicted ..	Indian Forest Act 25 (*b*).	Fine Rs. 3.	
	28	1	Do. ..	Do. ..	Do. ..	Do. Re. 1.	
	11	11/40	Do. ..	Do. ..	Do. ..	Do. Rs. 2	Do.
	9	1/2	Do. ..	Do. ..	Do. ..	Do. ,, 6	Do.
	36	3	Do. ..	Acquitted ..	....	.....	
	8	10	Do. ..	Convicted ..	Indian Forest Act 25 (*b*).	Fine Rs. 2	Do.
	12	162	....	....	....	.....	

67. Statement below gives complete statistics of the fires that took place during the year as required by Government Resolution No. 5148, dated 9th July 1897, in the Revenue Department :—

Division.	A.—Fires caused by accident or through carelessness in burning fire-lines.		B.—Fires entering the Forests by crossing exterior fire-traces.		C.—Fires beginning inside the reserve or fire-traced area.							
					Owing to carelessness or accident.							
					By workmen employed in the Forests by purchasers of forest produce or by yahu-cutters.		By villagers, travellers, &c., passing through the Forest.		By railway engines.		By lightning or by fire balloons.	
	Number of fires.	Area burnt in acres.	Number of Fires.	Area burnt in acres.	Number of fires.	Area burnt in acres.	Number of fires.	Area burnt in acres.	Number of fires.	Area burnt in acres.	Number of fires.	Area burnt in acres.
East Khándesh	1	700	5	20,659	9	31,319	1	1,000	...	...	...	...
West Khándesh ...	3	108	3	3,215	...	...	20	27,998	...	...	...	...
Násik	...	...	...	...	8	696	10	58	...	..	...	...
Ahmednagar	...	...	...	...	1	1	4	9	3	18	...	...
Poona	...	...	11	74	1	Sq. ft. 9	12	74	2	4	...	...
Sátára	7	147	1	3	1	14	31	316	...	...	1	8
Sholápur...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	11	955	20	23,951	20	32,030	78	29,455	5	22	1	8

Division.	C.—Fires beginning inside the reserve or fire-traced area.								Causes unknown.		Total A, B and C.	
	By intentional firing.											
	In order to obtain new grass.		In order to turn out game or to reduce cover.		Maliciously fired.		Total.					
	Number of fires.	Area burnt in acres.	Number of fires.	Area burnt in acres.	Number of fires.	Area burnt in acres.	Number of fires.	Area burnt in acres.	Number of fires.	Area burnt in acres.	Number of fires.	Area burnt in acres.
East Khándesh	...	...	...	...	...	...	...	...	13	8,817	29	62,495
West Khándesh ...	...	...	5	11,145	...	...	5	11,145	47	68,314	78	110,780
Násik	...	...	...	...	...	...	...	...	44	3,629	62	4,383
Ahmednagar	...	...	...	...	...	...	...	...	...	...	8	28
Poona	...	...	1	3	2	5	3	8	27	611	56	771
Sátára	2	50	1	4	2	7	5	61	1	8	47	557
Sholápur...	...	...	...	...	...	...	...	...	3	4	3	4
Total ...	2	50	7	11,152	4	12	13	11,214	135	81,383	283	179,018

(3).—Regulation of Grazing and Protection from Cattle.

68. No change has been made in the grazing rules sanctioned by Government in their Resolution No. 3595, dated 23rd May 1890. Owing to the dearth of grass after the rainy season, 1896, considerable areas of closed forest had to be opened to free grazing throughout the Deccan districts; and the following table shows the areas closed and open to grazing in the several divisions of the Central Circle, as compared with those of the year preceding :—

No.	Division.	1895-96.			1896-97.		
		Closed.	Open.	Total.	Closed.	Open.	Total.
		Sq. Miles.	Sq. Miles	Sq. Miles.	Sq. Miles.	Sq. Miles.	Sq. Miles
1	East Khándesh	72	739	811	53	758	811
2	West Khándesh	363	1,372	1,735	69	1,670	1,739
3	Násik	553	726	1,279	254	1,025	1,279
4	Ahmednagar	294	554	848	47	801	848
5	Poona	236	475	711	40	671	711
6	Sátára	130	558	688	103	595	698
7	Sholápur	137	141	278	135	143	278
	Total ...	1,785	4,565	6,350	701	5,663	6,364

69. Thus it will be perceived that the total area made available for grazing during the year is nearly 1,000 square miles greater than that of the preceding year.

70. The following table shows the number of cattle of different kinds impounded during the year for trespassing in closed forests and for grazing in open forests without permits :—

No.	Division.	Kind of Forest.	Cows and bullocks.	Buffaloes.	Camels.	Horses.	Asses.	Sheep.	Goats.	Total from	
										Closed.	Open.
1	East Khándesh	Closed ...	7,648	1,279	...	66	...	408	30	9,431	...
		Open ...	4,723	636	...	13	...	2,000	900	...	8,272
2	West Khándesh	Closed ...	7,746	1,422	...	267	...	4,217	1,747	15,399	...
		Open ...	2,909	419	...	986	...	3,946	2,037	...	10,297
3	Násik	Closed ...	7,900	1,002	...	124	...	13,632	4,131	26,789	...
		Open ...	7,331	1,370	...	166	3	11,507	8,450	...	28,827
4	Ahmednagar	Closed ...	22,424	1,422	...	356	95	6,929	4,831	36,057	...
		Open ...	8,660	2,627	1	57	46	6,908	4,312	...	22,611
5	Poona	Closed ...	12,573	807	...	150	97	9,750	3,488	26,865	...
		Open ...	4,815	472	...	140	42	7,629	2,513	...	15,611
6	Sátára	Closed ...	6,795	724	...	62	25	5,718	947	14,271	...
		Open ...	4,011	494	...	44	...	6,329	1,186	...	12,064
7	Sholápur	Closed ...	6,563	721	...	94	33	1,609	938	9,958	...
		Open ...	1,125	118	...	12	...	831	1,424	...	3,510
	Total ...	Closed ...	71,649	7,377	...	1,119	250	42,263	16,112	138,770	...
		Open ...	33,574	6,136	1	1,418	91	39,150	20,822	...	101,192
	Grand Total from closed and open	.....	105,223	13,513	1	2,537	341	81,413	36,934	239,962	
	Do. for 1895-96...	.....	148,313	16,293	163	1,835	387	79,303	75,700	321,994	

71. Impoundings from closed forests of the East Khándesh Division and from open forests of the West Khándesh and Násik Divisions are slightly greater in comparison with those of the previous year, but this is almost entirely owing to cattle of wandering graziers from foreign territory having been trespassed; while in the division of Ahmednagar, Poona, Sátára and Sholápur impoundings from "closed" as well as from "open" areas have been considerably less; and the total number impounded during the year is 82,032 below the figures of 1895-96. This decrease is owing to the impounding of cattle from open forests having been stopped subsequent to November 1896, seeing that there was no grass for cattle to eat, that the animals were starving and their owners did not in many cases consider it to be worth while to pay pound-fees to release their animals.

72. The following table will show the extent to which cattle impounded for trespassing in closed forests were covered by passes for open forests as

required by paragraph 5 of Government Resolution No. 8265, dated 21st October 1896, Revenue Department:—

No.	Division.	Number of Cattle.
1	East Khándesh	5,017
2	West Khándesh... ...	8,566
3	Násik	7,636
4	Ahmednagar	2,332
5	Poona	...
6	Sátára	...
7	Sholápur	...
	Total ...	23,551

73. To protect the forests from the inroads of cattle, fencing, with barbed wire, with the crown branches of bábul trees armed with sharp thorns, with Euphorbia neriifolia, is resorted to. Towards the close of the year a consignment of 15 linear miles of barbed wire fencing has been received on indent from the Secretary of State for India for each division; and besides there were in stock material for fencing 10 linear miles obtained from England during 1895-96; and in addition to the above some barbed wire for fencing was bought in the Bombay market which was attached to wooden posts from the forests:—

No.	Division.	Wire.	Staples.
		Cwts.	Lbs.
1	West Khándesh ...	100	392
2	Násik	142	580
3	Ahmednagar... ...	....	112
4	Sholápur	4	56
	Total ...	246	1,140

74. The following table exhibits the progress made in fencing and the cost incurred during the year:—

No.	Division.	Length of								Total cost.
		Wire fencing.		Euphorbia neriifolia fencing.		Prickly-pear fencing.		Thorn fencing.		
		Miles.	Yds.	Miles.	Yds.	Miles.	Yds.	Miles.	Yds.	Rs.
1	East Khándesh	22	1,320	...	...	...	...	...	...	4,076
2	West Khándesh	20	...	...	...	...	...	...	...	3,274
3	Násik	16	158	...	...	...	...	...	...	3,478
4	Ahmednagar	7	600	..	...	...	...	...	...	2,529
5	Poona	14	1,176	2	962	...	...	14	508	5,696
6	Sátára	15	...	...	...	...	...	...	...	3,555
7	Sholápur	9	...	...	...	2	1,540	...	...	3,776
	Total ...	104	1,494	2	962	2	1,540	14	508	26,384

75. Thorn fences were made round the stools of the departmentally felled anjan (Hardwickia binata) trees in the Dhulia and Pimpalner ranges of the West Khándesh Division to protect the very delicate re-shoots of this species from stray cattle and deer. In Ahmednagar Division bábul coupes exploited during the year were fenced round with bábul thorns; and 6,425 aloe bulbs were put along forest boundaries by Forest Guards without any cost being incurred on their account.

(*c*).—Improvement of Forest Growth.

(*1*).—*Natural Reproduction.*

76. Owing to the peculiarly unfavourable character of the monsoon rainfall with heavy deluges at the commencement followed by a lengthened break,

and subsequent great drought, conditions were not favourable to the germination of self-sown seeds in the forests, nor to the general seeding of trees.

77. In East Khándesh coppice shoots in exploited coupes have made a fair start. The anjan (Hardwickia binata) seeded very sparsely during the year in this district. The unusual phenomenon was observed of a Nim (Melia azaderachta) tree seeding in the month of October.

78. Seedling reproduction of teak was generally fair throughout the better classes of forests of the West Khándesh Division and would ordinarily be excellent but for the effect of forest fires. Reproduction by stool shoots from the felled teak and anjan is uniformly good.

79. In the north of Málegaon in the Násik Division anjan was found to have seeded well, and the ground beneath some trees was covered with young seedlings as may be seen under beech trees in most years in Europe. But owing to the stripping of the leaves of the anjan for fodder seeds which had appeared on the trees in many directions had no chance to ripen. The tarwad, Cassia auriculata, seeded abundantly.

80. The rainfall in Ahmednagar Division, being 12·31 inches against 25·25 of the previous year, was not sufficient for the normal natural growth of plant life; but notwithstanding such unfavourable circumstances seedlings from self-sown seed were seen in many of the forests.

81. In the Poona Division owing to the failure of the latter rains a large proportion of the seedlings which had germinated from seeds naturally shed early in the season were unable to withstand the prolonged drought. Again in the drier portions of the district seeds which would have sprouted in ordinary years failed to do so entirely this year on account of the want of moisture.

82. In the Sátára Division the heavy torrential rains at the commencement of the season, and the subsequent lengthened drought, not only retarded the growth of seedlings, but to a great extent prevented the successful germination of seeds, which, where they were not washed out of the ground and carried away into the streams, rotted in the ground; while the unavoidable admission of large numbers of starving cattle into the closed reserves owing to the famine caused injury and destruction to many tender young seedlings which were either trodden down or browsed down.

83. Natural reproduction is never very prominent in the Sholápur Division, except in specially fertile localities; and this year even these, except where they are subject to the influence of river floods, have profitted little.

(2).—*Artificial Reproduction.*

84. Considerable attention was given as usual to artificial measures for growing trees. The ordinary methods such as ploughing and sowing in furrows sowing in pits, in seed-beds, dibbling under bushes and broad-casting have been followed both in the exploited coupes of the year and also in other selected localities, and the following table represents the work done during the year in the several divisions of the Central Circle :—

No.	Division.	Ploughing.		Sowing in pits.	Sowing in seed-beds and patches.	Dibbling under bushes, &c.	Broad-casting by Forest Guards.	Drill sowing.	Cost.
		Full.	Furrows.						
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.
1	East Khándesh	323	...	310	.....	607	2,509	...	360
2	West Khándesh	...	...	142	.....	.....	...	...	1,691
3	Násik	35	...	3,589	.....	.....	...	...	1,584
4	Ahmednagar	167	...	61,100 No.	.. ...	6,145 148,050 No.	7,480	978	1,346
5	Poona	416	...	3,312	.....	.....	818	...	4,501
6	Sátára	...	134	4,4300 No.	156,296 No.	.....	14,684	...	2,778
7	Sholápur	67	22	.....	.....	462	247	...	1,702
	Total ...	1,008	156	*7,353 Acres 105,400 Pits.	156,296 No.	7,214 Acres 148,050 No.	25,738	978	13,962

* Of the 7,353 acres 2,144 acres represent the work done by Forest guards.

85. The localities where the different methods are applied are briefly :— Ploughing and sowing in furrows take place in the bábul coupes exploited during the year, the soil being black and soft. Sowing in pits is undertaken in hard and murum soil, and on hill slopes, seeds sown in pits on the shady side of Euphorbia cactus and other thorny bushes have been remarkably successful even in the more arid parts of the divisions. Sowing in seed-beds or patches is adopted in the Sátára Division in the exploited teak coupes of the year as well as in other forest areas : and broad-casting is spread as usual over hill slopes treated for reboisement. The results have not been satisfactory owing to the unfavourable circumstances of the year, but the Divisional Forest Officer, Sátára, reports about the dibbling in bushes and the sowings made in patches in the following words.

"From reports received from the Range Forest Offieers and from what the Divisional Forest Officer has personally seen, the best results so far obtained are from 'patches' and 'dibbling in bushes.' The 'patches' are a treat to be seen and are written most enthusiastically by Range Forest Officers. The germination has been most successful and there is scarcely a patch that has not got its little cluster of 6 or 8 little teak seedlings, and as these patches have been made at intervals of 8 paces or about 20 feet apart, over the whole area of the coupes, the coupes are now well stocked with on the average 100 seedlings per acre."

(3).—*Early Thinnings.*

86. The forests in the Deccan are not yet so thickly stocked with trees as to allow the cutting of young and immature trees for the purpose of improving the growth of trees by thinning. Thinnings are sometimes required to be made along cart tracks and foot-paths passing through forests, and this work is generally performed by Forest Guards.

(4.)—*Other Operations for the improvement of Growing Stock.*

87. These operations consisted of eradicating the peerul creeper (Combretum) from the bábul reserves of the Bhusával Range of the East Khándesh Division, and the cutting of creepers generally in the forests of all other divisions.

88. Considerable activity has also been displayed in eradicating "prickly-pear", Opuntia dillenii; and the table below will show the extent of the work during the year, by paid-labour, as well as by Forest Guards :—

No.	Division.	By paid labour.	Cost.	By Guards.
		Area in acres.		Area in acres.
1	East Khándesh	...	...	.....
2	West Khándesh	...	...	.....
3	Násik	570	576	.....
4	Ahmednagar	4	574	963 Cart-loads.
5	Poona	...	...	.....
6	Sátára	17	540	.....
7	Sholápur	2	222	7
	Total ...	593	1,912	7 Acres. 963 Cart-loads.

(5).—*Experiments.*

89. In East Khándesh a few sucker plants of Millingtonia hortensis were obtained from Poona and were planted on the forest boundary lines, but they failed to survive the hot weather.

90. A small quantity of seeds of the Lagerstrœmia flos reginæ received from Assam was sown in the Dhulia and Dahiwel nurseries of the West Khándesh Division, and the young plants are reported to be thriving.

91. Cypress seed sown in the garden of the Divisional Forest Office at Násik did not germinate.

92. No new exotics were tried in the Poona Division; but of those planted or sown in the previous year, the date palm has all died; anjan (Hardwickia binata) seeds brought from Khándesh and sown in the Bhamburda closed forest geminated freely, and the plants are alive, but they grow very slowly.

93. In the Sátára Division large quantities of Grevillia robusta and Casuarina seedlings were raised in the Lingmalla Nursery for furture transplantation. The Grevillia seedlings showed a most vigorous growth, and by the end of May they stood quite 3 feet high in the boxes in which they were raised. No other experiments were made during the year.

94. No experiments of exotics have been made in the Ahmednagar and SholápurDivisions.

(*d*).—Exploitation of Major Forest Produce.

(*1*).—*Clear or Regeneration Fellings.*

95. In the East Khándesh Division clear fellings of bábul were made in 5 coupes of the year in the Bhusával and Edlábád ranges, and in addition to this a clearing of over 520 acres of disforested land was made in the Chopdá Range. Further in the Jámner Range, the trees standing upon several occupied and revenue waste lands were felled yielding 15,000 teak pieces.

96. In West Khándesh clear fellings were made at Ubhand in the Nizámpur Range and 200,000 cubic feet of kheir (Acacia catechu) and inferior kind of firewood were cut and sold departmentally during the year under report.

97. In the Násik Division no clear fellings properly so called were undertaken during the year. In the river side bábul reserves many trees were levelled by floods and by high winds in the Niphád Range, and the wood yielded by them was given to the Mámlatdár for the use of famine relief kitchens.

98. In the Ahmednagar Division clear fellings were confined to bábul reserves, the material being exploited under the coupe system by the contractor or purchaser. Coupes thus exploited were sown with seeds during the following rains. The following statement gives the number of cubic feet of timber thus removed and the amount realized by sale:—

No.	Range.	Name of block.	No. of compartment.	Area.	No. of trees.	No. of cubic feet.	Amount realized in auction sale.	Remarks.
				A. g.			Rs. a. p.	
1	Nagar	Nalegaon	6	3 12	313	929	291 0 0	
2	Shrigonda ...	Kawthe	6, 7	8 9	1,249	5,823	335 0 0	
		Wangdari	6, 7	33 35	2,063	3,451	200 0 0	
		Ajnuj...	4, 5	9 28	822	1,599	76 0 0	
3	Sheogaon ...	Zorapur	5	2 3	153	1,487	50 0 0	
		Ghewri	5, 6	10 34	654	1,630	84 0 0	
4	Ráhuri	Deolali	6	8 18	1,442	2,295	110 0 0	
		Hanumantgaon ...	7	5 16	710	450	31 0 0	
5	Kopargaon ...	Sanwatsar	6	6 10	21	23	3 8 0	
		Malegaon Thadi ...	6	8 13	238	697	14 0 0	
		Singnapur	6	6 18	99	225	21 0 0	
		Sangvibhusar ...	6	6 35	15	12	1 6 0	
		Mursatpur	6	3 8	22	23	4 0 0	
		Morwis	6	3 6	111	540	9 0 0	
		Velapur	6	5 22	110	549	9 4 0	
		Sanwatsar	7	7 9	179	315	34 0 0	
		Kumbhari	7	7 33	225	585	15 0 0	
		Kokamthan	7	5 38	59	225	70 0 0	
		Suregaon	7	2 22	261	720	20 4 0	
		Dharangaon	7	4 22	206	900	27 0 0	
		Kumbhari	7	4 6	261	1,935	71 0 0	
		Sanwatsar	7	6 26	200	450	41 0 0	
		Kokamthan	6	5 1	219	360	48 0 0	
		Wari	7	6 18	236	1,485	136 0 0	
6	Sangamner ...	Jorwe...	6	4 12	368	3,500	609 0 0	
		Pimparne	3	9 33	231	1,121	40 0 0	
		Total ...	30	186 7	10,467	31,320	2,350 6 0	

99. In the Poona Division the bábul reserves were treated in the same way as in the Ahmednagar Division, and the statement given below shows a comparison between area of bábul coupes exploited in 1895-96 and 1896-97 :—

Range.	Area clear-felled.		Remarks.
	1895-96.	1896-97.	
	A. g.	A. g.	
Bhimthadi	34 17	64 3	
Dhond	54 13	194 1	
Haveli	17 31	12 6	
Indápur	4 4	72 0	
Sirur	39 21	63 38	
Total ...	150 6	406 8	

100. The subjoined statement gives the area of occupied lands outside forest boundaries cleared of royalty trees during the year in the Poona Division :—

Range.	Area.	Remarks.
	A. g.	
Ambegaon	1,608 29½	
Haveli	466 11	
Junnar	1,447 22	
Khed	530 0	
Purandhar	1,654 16	
Total ...	5,706 38½	

101. Under this head the bábul forests in the Tásgaon Range of the Sátára Division were exploited under the provisions of a working plan prepared by Mr. Fagan; and in like manner in the Sholápur Division the bábul coupes only were subjected to this process of felling. During the year only 2 coupes were sold, *viz.*, the Bale Kuran of Sholápar city and Mohol. The following statement gives the result of these two sales :—

Coupe.	Area.	Cubic contents.	Price.	Remarks.
	Acres.		Rs.	
Bale Kuran	33	8,500	2,200	
Mohol...	12	1,500	100	
Total ...	45	10,000	2,300	

(*2*).—*Selection Fellings.*

102. In the Násik Division such fellings have now been abolished generally, but in order to make up the quantity of wood due to a contractor only 20 khandis of tiwas (Ougeinia dalbergioides) were felled by him, the trees having been selected and marked.

103. In the Poona Division 3,005 cubic feet of timber were given as free grants, the trees to be felled being selected and marked by the Range Forest Officer.

104. In the Sátára Division 367 poles in the Pátan and Mahábaleshvar ranges were felled by selection and, when sold, realized a sum of Rs. 196 only.

(*3*).—*Improvement Fellings and* (*4*).—*Coppice Fellings.*

105. In the East Khándesh Division one coupe in the Chálisgaon and two in the Edlabad Range were sold on foot and exploited under this system, the

trees for removal having been marked previously. Departmental working had to be resorted to in rest of the coupes where there was a chance of the felled material being sold, and in order to satisfy local demands. Thorns and a small quantity of firewood were permitted to be removed from some coupes by merchants.

106. In the Dhulia Range of the West Khándesh Division coppice fellings of anjan (Hardwickia binata) will be throughout the whole of the first revolution improvement fellings in the strictest sense of the term, for all young and promising trees are reserved for another revolution; crooked and unsound trees only being felled and removed after a fair number of seed-bearers have been reserved.

107. In the Násik Division coupes were laid out under the system of coppice with standards in Nándgaon, Igatpuri and Násik ranges, and in the Peint Range teak trees, 200,625 in number, standing upon occupied lands outside of sanctioned forest boundaries, were sold to purchasers to fell and remove.

108. In the Ahmednagar Division fellings of teak and jambul (Eugenia) were made in the Sangamner and Akola ranges for their improvement, only such trees being retained as are likely to become mature, and seeds are scattered over the compartments after it has been worked out :—

No.	Range.	No. of Trees.	Yield.		Cost.	Receipts.	Cost per 100 trees.	Receipts per 100 trees.	Remarks.
			Rafters.	Firewood.					
	Teak.			C. ft.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
1	Sangamner	3,760	6,933	3,510	113 3 9	1,242 12 6	3 0 0	33 0 0	310 pieces were kept for wire fence at Kolhewádi.
	Jambul.								
	Ditto ...	2,850	7,901	2,050	68 14 3	.....	2 7 0	...	Not sold.
	Teak.								
2	Akola... ...	10,231	8,032	3,510	412 3 0	219 14 0	4 0 0	28 6 0	9,456 teak trees or 7,483 pieces and Fire-wood 3,105 cubic feet were not sold.
	Total ...	16,841	22,866	9,070	594 5 0	1,462 10 6	...	...	
	Total of Teak...	13,991	14,965	7,020	525 6 9	1,462 10 6	3 8 0	30 8 0	
	Total of Jambul	2,850	7,901	2,050	68 14 3	.....	2 7 0	...	

109. In the like manner in the Poona Division the teak forests were worked for their improvement, the areas exploited during the year are distributed thus :—

No.	Range.	Area.	Remarks.
		A. g.	
1	A'mbegaon	276 35	
2	Háveli	288 38	
3	Junnar...	196 2	
4	Khed	168 25	
5	Purandhar	167 34	
	Total ...	1,098 14	

110. In the Sátára Division improvement fellings under the Working Plans prescriptions were carried out in the workable forests of the "Teak-region" and in the evergreen forests of the Mahábaleshvar Range.

(5).—*Unregulated Fellings.*

111. The exploitation of timber, firewood, bamboos and other forest produce from the Sátpuda forests by Bhil and privilege-holders may be classed under this head.

112. At present in the West Khándesh Division the major portion of the fellings comes under this head: there are still a large number of royal trees, especially teak, standing on lands outside the boundaries of reserved forests.

113. In the Násik and other divisions the work of clearing of boundary lines, as also fellings for free grants of timber, wood supplied for relief kitchens, &c., come under this head. The Executive Engineers of Khándesh and Násik were supplied with timber and bamboos for building huts for famine labourers.

114. Unregulated fellings go on in the old gáirán areas of the Poona Division which extend over 12,576 acres.

115. In the Sátára Division cutting of royalty trees in Málki lands, clearing of boundary lines, &c., were undertaken under this method during the year under report.

(*e*).—Extraction and Transport of Major Forest Produce by Land and Water.

116. Cart tracks traverse the forests of this Circle which are below the ghâts, in all directions, as also the forest areas in the Deccan, except on the very mountainous parts, and timber, firewood, bamboos, &c., are carried in bullock carts wherever carts can travel. In some parts of the Sátpuda forests timber and bamboos are dragged by bullocks and ponies.

117. In mountainous tracts bordering the Syhádris, timber, &c., is moved on the backs of pack animals and in head-loads. The Forest Department does not undertake the carrying of timber or other forest produce, either by land or by water, but preferentially sells the trees on foot for the purchaser to fell and remove at his own cost. Timber, &c., cut by departmental labour is brought to temporary sale-depôts, either inside or outside forests, where it is stacked and sold by public auction, the material being removed subsequently by the purchasers. The Narbada, the Tápti, the Godávari, the Bhima, the Koyna and Wárna are the only water-ways which are sometimes used by purchasers, timber-dealers and private owners for floating timber.

(*f*).—Exploitation of Minor Forest Produce.

(*1*).—*Extraction of Fodder.*

118. Grass is exploited by hand from certain valuable kurans of the Central Circle, and the right to cut grass is sold by public auction. The grass is also removed on permits issued on payment of fees. The means that are used for removing grass are the same which are used for the removal of timber.

119. The statement given below shows the area from which grass was removed by hand and the amount realized :—

No.	Division.	Area.	Amount.
		Acres.	Rs.
1	East Khandesh ...	20,324	14,615
2	West Khandesh ...	20,827	9,450
3	Násik	31,328	14,652
4	Ahmednagar	91,540	4,695
5	Poona	27,848	1,263
6	Sátára	18,853	4,612
7	Sholápur	9,645	1,303
	Total ...	220,365	50,590

120. In the East Khándesh Division 57,531 cart-loads of grass valued at Rs. 7,191 were removed from the forests on permits; while in the West Khándesh Division 66,560 cart-loads, 3,912 head-loads, 974 bullock loads and 73 donkey-loads valued at Rs. 13,329 were removed from forests on payment of fees. In the Násik Division 5,692 cart-loads of grass were removed and the amount realized was Rs. 2,840. In addition to this, owing to the scanty rainfall and want of fodder for cattle, 231,491 pounds of grass were cut in forests at Rs. 2-8-0 per 1,000 lbs., and sold for Rs. 814.

121. In the Ahmednagar Division an area of 4,935 acres, the grass on which is valued at Rs. 12,750, was handed over to the Commissariat Department,

Remount and Rearing Depôt and Civil Veterinary Departments, under the authority of Government Resolution No. 6047, dated 25th August 1890, for the supply of grass for troop horses and other cattle belonging to Government :—

No.	Name of Reserve.	Area.	Estimated value.
	(a).—The Commissariat Department.	A. g.	Rs. a. p.
1	Kapurwadi	512 15	618 0 0
2	Deogaon	126 20	1,250 0 0
3	Ratadgaon	270 31	2,738 0 0
4	Imampur	537 12	1,646 0 0
5	Sassewadi	347 0	1,245 0 0
6	Manjor Sumbha	535 17	1,500 0 0
7	Shendi	273 36	2,000 0 0
8	Ghospuri	580 4	1,411 0 0
	Total ...	3,183 15	12,408 0 0
	(b).—The Remount Department.		
1	Walunj	371 30	65 0 0
2	Ranjani	401 36	87 0 0
3	Padampur	13 27	66 0 0
4	Hamidpur	67 12	83 0 0
5	Pimpalgaon Malvi	777 16	31 0 0
	Total ...	1,632 1	332 0 0
	(c).—Civil Veterinary Department.		
1	Shendi	119 14	13 0 0
	Total ...	119 14	13 0 0
	Grand Total ...	4,934 30	12,753 0 0

122. In the Poona Division the undermentioned reserved forests were placed at the disposal of the Commissariat Department for the exploitation of grass by hand. In ordinary years the grass of these forests is assessed at Rs. 28,735, but seeing that the baled grass brought in the famine grass operations though of inferior quality to that produced in these forests sold by public auction in Poona at Rs. 16 per 1,000 lbs., it would not be too much if the estimate is doubled during the year of the report and the value of the grass were to be assessed at Rs. 57,000 :—

No.	Name of Forest.	Forest area.	Yield of grass in Tons.
	For Cutting.		
	Mulshi Range.	A. g.	
1	Ghotawde	539 13	34·8
2	Darawli	169 13	35·7
	Total ...	708 26	70·5
	Purandhar Range.		
3	Bhiwari	197 15	56·8
4	Shivre	136 2	35·6
5	Pokhare	142 4	23·7
6	Bhongaoli	809 12	69·5
	Total ...	1,284 33	185·6

No.	Name of Forest.	Forest area.	Yield of grass in Tons.
	Mával Range.	A. g.	
7	Umbre Naulac	760 35	119·2
8	Ambi	208 28	64·4
9	Akurdi	120 28	52·8
10	Nanoli	170 0	82·0
11	Induri	198 36	52·6
12	Wadgaon	151 0	31·4
13	Pachane	113 22	34 8
14	Pusane	135 5	35·0
15	Talegaon	295 28	24·1
	Total ...	2,154 22	496·3
	Khed Range.		
16	Chakan	536 26	22·6
17	Chimbhali	263 20	38·9
18	Ambethan	259 24	49·5
19	Warale	141 38	14·1
20	Wasuli	96 12	24·8
21	Kohinde Budruk (Kundeshwar)...	681 7	66·7
22	Sinde	222 20	31·8
	Total ...	2,201 27	248·4
	Haveli Range.		
23	Katraj	1,859 35	634·5
24	Undri	136 10	33·4
25	Pisoli	58 4	23·4
26	Kondhawe Budruk	327 39	39·2
27	Gogalvadi	252 18	26·1
28	Kopre	157 38	39·2
29	Agalambe	464 34	58·6
30	Dhairi	264 28	48·2
31	Arvi	354 27	17·6
32	Ambribowa	257 18	110·3
33	Dharjai	406 1	79·4
34	Bhawanichadara	85 7	17·3
35	Kalyan	149 7	48·6
36	Khadakwasle	90 24	22·9
37	Pashan	198 13	57·1
38	Bawadhan Khurd...	241 24	35·9
39	Warje	128 0	13·6
40	Bhukum	28 23	17·8
41	Marunji	54 14	17·5
42	Kotharud	316 11	23·5
43	Parwati	592 10	118·7
44	Dighi	170 1	48·2
45	Dhanori	177 35	27·3
46	Kasarsai	103 20	50·6
	Total ...	6,876 1	1,608·9
	Grand Total ...	13,225 29	2,609·7

And the undermentioned reserved forests were placed at the disposal of the Commissariat Department for the grazing of slaughter cattle :—

	For Grazing.	A. g.
1	Wanawari	122 24
2	Hadpsar	27 11
3	Mahomedwari	47 39
4	Undri	19 38
5	Kondhawe Khurd	32 7
	Total ...	249 39

123. In addition to the above the reserved forest at Manjri Budruk in the Haveli Range, known as the Manjri Kuran, representing an area of 278 acres, the value of the grass of which in ordinary years is assessed at Rs. 692, was transferred permanently to the Agricultural Department.

124. In the Sátára Division an area of 220 acres of reserved forests, assessed at Rs. 265, was placed at the disposal of the Commissariat Department for the purpose of exploiting grass.

(2).—Grazing.

125. The following statement shows the number of cattle of different kinds which grazed in the forests during the year 1895-96 and 1896-97 :—

No.	Division.	Buffaloes.		Cows and Bullocks.		Goats and Sheep.		Camels.		Other Animals.		Total.	
		1895-96.	1896-97.	1895-96	1896-97.	1895-96.	1896-97.	1895-96.	1896-97.	1895-96.	1896-97.	1895-96.	1896-97.
1	East Khándesh ..	25,863	24,062	151,448	155,775	71,467	24,920	...	...	1,328	903	250,106	205,660
2	West Khándesh ..	18,277	20,829	173,404	140,565	292,003	270,264	...	...	6,869	4,175	490,553	435,833
3	Násik	11,234	12,080	183,996	184,804	37,232	35,281	...	...	860	841	233,322	233,006
4	Ahmednagar	4,955	3,366	103,649	101,129	57,198	59,009	...	...	393	381	166,195	163,885
5	Poona	17,692	13,853	98,070	120,125	65,192	54,250	...	...	263	110	181,422	188,338
6	Sátára	10,286	8,520	59,885	61,535	65,085	58,122	...	...	11	...	135,267	128,177
7	Sholápur	2,208	441	29,916	14,324	...	...	...	...	30	377	32,154	15,142
	Total ...	90,715	83,151	800,368	778,257	588,177	501,846	...	...	6,759	6,787	1,489,019	1,370,041

126. And the following of the above numbers respectively enjoyed free grazing compared with those of preceding year, under free grazing permits issued :—

No.	Division.	Buffaloes.		Cows and Bullocks.		Goats and Sheep.		Other Animals.		Total.	
		1895-96.	1896-97.	1895-96.	1896-97.	1895-96.	1896-97.	1895-96.	1896-97.	1895-96.	1896-97.
1	East Khándesh ...	2,622	2,387	8,470	12,573	...	...	109	260	11,201	15,220
2	West Khándesh ...	2,054	3,805	23,561	18,129	194	240	376	189	26,185	22,363
3	Násik	2,305	1,895	76,772	74,946	300	300	502	502	79,879	77,643
4	Ahmednagar	385	385	5,423	4,237	...	...	...	...	5,808	4,622
5	Poona	13,352	12,347	78,365	108,410	...	...	24	3	91,741	120,760
6	Sátára	6,104	5,736	37,335	46,764	...	...	...	...	43,439	52,500
7	Sholápur	716	211	5,414	8,871	...	...	...	374	6,130	9,456
	Total ...	27,538	26,766	235,340	273,930	494	540	1,011	1,328	264,383	302,564

127. But when forest areas, excepting those specially under re-forestry, such as compartments of forest blocks which have been worked recently, trees having been felled and timber exploited, and the coupe subsequently sown up, and regular plantations, were opened for the free grazing of cattle in the distressed tracts, which covered the whole area of the Central Circle, by order of the Commissioner, C. D., in communication with the Conservator of Forests, Central Circle, during the month of November 1896, the issue of free grazing permits was suspended and all and any cattle were permitted to enter and to graze without hindrance or interference, so that the figures in the foregoing table do not show anything like the total number of cattle that enjoyed free grazing in the forests during the year.

128. A comparison between the grass and grazing receipts of the year of this report and of 1895-96 is represented in the subjoined statement :—

No.	Division.	1895-96.	1896-97.	Remarks.
		Rs.	Rs.	
1	East Khándesh	86,238	81,063	
2	West Khándesh	1,20,067	1,04,163	
3	Násik	54,050	59,333	
4	Ahmednagar	38,960	38,193	
5	Poona	46,818	40,127	
6	Sátára	39,963	35,330	
7	Sholápur	21,304	20,047	
8	Famine grass and grazing ...	...	66,351	
	Total ...	4,07,400	4,44,607	

129. There is a decrease in the revenue from the sale of grass and grazing during the year under report in almost all the divisions of the Central Circle, which is seemingly owing to the fact that as the rainfall was unseasonable and deficient, the crop of grass was very uncertain and eventually proved to be comparatively scanty in the moist region bordering the Syhádris, while in the eastern parts of the Circle there was little or no grass. Another cause of the diminished revenue is that free grazing was conceded to all village cattle by the end of November 1896. But the decrease in fees and in sale receipts of fodder grass has been more than made up by famine grass operations undertaken by the orders of Government for the supply of hay to the starving cattle in the famine-affected areas.

130. The cattle census of the different Collectorates comprising the Central Circle is as under :—

No.	Collectorate.	Cows and Bullocks.	Buffaloes.	Horses and Ponies.	Asses and Mules.	Sheep.	Goats.	Camels.	Other Animals.	Total.
1	Khándesh ...	674,246	173,315	24,311	7,482	32,348	214,905	7	13	1,126,627
2	Násik	453,088	67,861	16,117	3,385	102,213	129,059	...	...	771,723
3	Ahmednagar ...	552,969	49,239	22,052	7,187	247,366	193,455	9	...	1,072,277
4	Poona	476,252	68,024	13,052	5,659	211,802	112,364	6	...	887,159
5	Sátára	488,548	150,256	13,235	3,048	336,954	119,243	...	...	1,111,284
6	Sholápur ...	293,519	24,987	8,610	3,015	170,290	119,657	42	...	620,120
	Total ...	2,938,622	533,682	97,377	29,776	1,100,973	888,683	64	13	5,589,190

(3).—*Miscellaneous Produce.*

131. Hirda, the fruit of Terminalia chebula, is the main item of miscellaneous products which are exploited for sale from the forests of the Central Circle, while shikakái, the pod of Acacia concinna, tarvad, the bark of Cassia auriculata, the leaves of apta, Bauhinia racimosa, and temburni, Diospyros melanoxylon, are exploited for sale, but to a lesser degree. In like manner flowers, fruits, honey, wax and other items of minor forest produce assist to swell the revenue under this head.

132. In the East Khándesh Division there was a great fall in the revenue derived from rosha grass oil manufacture during the year under report, Rs. 300 being realized against Rs. 555 in 1895-96.

133. In West Khándesh Rs. 11,349 were realized for the right to cut the rosha grass during the year as against Rs. 16,425 the year before. No revenue is derived from mhowra flowers, and there is no hirda in this division.

134. In the Násik Division there was no demand for rosha grass this year, consequently it was not sold. Rs. 2,040 were realized by the sale of apta and temburni leaves during 1896-97 as against Rs. 1,666 in 1895-96. About 26 deshi khandis of collected hirda nuts were sold for Rs. 1,353 as against Rs. 715 in 1895-96.

135. In the Ahmednagar Division produce exploited under this head consists of stones, earth, kárvi, tarvad, bábul pods, &c., the revenue being Rs. 2,092 against Rs. 1,911 of the previous year, and the hirda crop realized Rs. 1,413, the amount collected being 40 deshi khandis.

136. In the Poona Division the crop of myrobolans realized Rs. 2,333 during the year under report as against Rs. 2,914 in 1895-96, the decrease in question being chiefly due to the poorness of the crop.

137. In the Sátára Division the right to collect hirda in the Mahábaleshvar, Pátan and Shirála ranges was farmed out; and in the Jávli, Wái and Sátára ranges it was collected departmentally, and though the prices fell seriously low in the Bombay market, still the sale results of this crop were satisfactory. Owing to a very poor crop of shikakái the revenue realized from this source was very insignificant. All minor products as per Form No. 58 produced Rs. 20,401.

138. In the Sholápur Division a sum of Rs. 533 was realized by sale of other minor produce, of which Rs. 490 were from stones taken on permits.